

PROGRAMME SPECIFICATION

MSc Sustainable Agriculture and Food Security

1. Awarding institution	RAU
2. Teaching institution	RAU
3. Centre responsible for the programme	School of Agriculture, Food and Environment.
4. Programme Manager	Richard Baines
5. Final award title(s)	MSc Sustainable Agriculture and Food Security
6. Interim exit award Titles	Pg Diploma/ Pg Certificate in Higher Education
7. Academic level on Framework for Higher Education Qualifications (FHEQ)	7
8. UCAS code(s)	N/A
9. Relevant QAA Subject Benchmark Statement(s) and other reference points, e.g. FD qualification benchmark	<p>QAA Framework for Higher Education Qualifications (FHEQ) (August 2008)</p> <p>Agriculture, Horticulture, Forestry, Food and Consumer Sciences (2009)</p> <p>QAA Benchmark – Master's Degree 2015</p>
10. Details of accreditation by a professional/statutory body	N/A
11. Mode of delivery	Full-time or part-time
12. Language of study	English
13. AQSC approval date	October 2019
14. Valid from	October 2019
<i>For office use only</i>	
15. Valid to	August 2021
16. Version	V4.0 Ammended modules on 03/06/2020

17. Educational aims of the programme

This Master's programme specifically addresses sustainable agriculture and food security globally and is equally relevant to UK and overseas graduates; to those looking for intensive solutions or local, low tech solutions to food production. It is also of relevance to public administrations, international aid/funding agencies, and business sectors.

The ground-breaking Foresight Report¹ (2011) stated 'The global food system will experience an unprecedented confluence of pressures over the next 40 years. On the demand side, global population size will increase from nearly seven billion today to probably to over nine billion by 2050; many people are likely to be wealthier, creating demand for a more varied, high-quality diet requiring additional resources to produce. On the production side, competition for land, water, and energy will intensify, while the effects of climate change will become increasingly apparent. The need to reduce greenhouse gas emissions and adapt to a changing climate will become imperative'.

The programme explores five key challenges, namely:

1. Balancing future demand and supply sustainably.
2. Ensuring that there is adequate stability in food supplies – and protecting the most vulnerable from the volatility that does occur.
3. Achieving global access to food and ending hunger. This recognises that producing enough food in the world so that everyone can *potentially* be fed is not the same thing as ensuring food security for all.
4. Managing the contribution of the food production to the mitigation of climate change.
5. Maintaining biodiversity and ecosystem services while feeding the world.

Sir John Beddington's "Perfect Storm" argument centred around sustainable agricultural methods, environmental protection and food security driven by the triple issues of climate change, increasing demand for food and diminishing natural resources.

¹ Foresight. The Future of Food and Farming (2011) Final Project Report. The Government Office for Science, London. <http://www.bis.gov.uk/assets/bispartners/foresight/docs/food-and-farming/11-546-future-of-food-and-farming-report.pdf>

The Millennium Ecosystem Assessment² and the evaluation of the failure to achieve many of the Millennium Development Goals³ have both focused attention, through the Sustainable Development Goals⁴ on continuing food scarcity and the environmental degradation caused by the need to feed an ever-growing human population.

By focusing on sustainable natural resource management within the agricultural sector, students will explore a series of food-producing strategies, including large scale conventional agriculture, sustainable intensification, organic farming, small scale urban, peri-urban and community-based systems

Programme Aim

The aim of the programme is: -

‘To enable participants to gain the specialised knowledge, understanding, skills and attitudes necessary to contribute effectively and ethically to strategic decision making, opinion forming and operational management for the development of sustainable agriculture and food supply systems in both developed and developing regions’

With specific themes in

- ❑ **Human exploitation of the Earth’s resources for food production and the global and local implications of human development.**
- ❑ **The ecological basis for resource utilisation allied to wider environmental and landscape considerations of food production and supply**
- ❑ **The role and function of institutional structures in relation to development, resource exploitation, social, cultural, ethical and inter-generation considerations.**
- ❑ **The application of development paradigms models and tools to build capacity within communities, institutions and individuals.**

18. Learning Outcomes of the Programme

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Learning Outcomes	Teaching, learning and assessment strategies

² <http://www.millenniumassessment.org/documents/document.297.aspx.pdf>

³ [http://www.un.org/millenniumgoals/pdf/\(2011_E\)%20MDG%20Report%202011_Book%20LR.pdf](http://www.un.org/millenniumgoals/pdf/(2011_E)%20MDG%20Report%202011_Book%20LR.pdf)

⁴ <https://www.undp.org/content/undp/en/home/sustainable-development-goals.html>

A. Knowledge and understanding	
<p>In relation to agricultural production, resource use and food security, develop an in depth knowledge and critical understanding of:</p> <ol style="list-style-type: none"> 1. the principles and framework of sustainable development. 2. the principles of agricultural production at a variety of scales. 3. The sustainable management of natural resources 4. The principles of climate science and change 5. the provision of food quality, supply and security. 6. the processes of policy formulation in agriculture and food production. 	<p>Teaching Learning methods and assessment strategies</p> <p>Knowledge and understanding will be tested in a variety of types of coursework, including essays, reports, presentations and discussions and exams, including seen, unseen and take-away.</p>
B. Intellectual skills	
<ol style="list-style-type: none"> 1. Ability to locate, synthesise, analyse and evaluate data and information from a wide range of sources to support and evidence solutions to practical problems and policy challenges. 2. Ability in critical thinking, creativity and leadership skills in addressing diverse organisational, business and social issues. 3. Skills in research methods and how to undertake a substantive investigation into a theoretical or practical problem. 	<p>Teaching Learning methods and assessment strategies</p> <p>Assessment of these three will be within coursework & presentations within taught modules, and especially within the research project.</p>
C. Practical/professional skills	
<ol style="list-style-type: none"> 1. communication through a variety of methods to a variety of audiences. 2. Ability to analyse, interpret and respond to a range of data and information to make policy decisions. 3. Management of projects through the application of project 	<p>Teaching Learning methods and assessment strategies</p> <p>Coursework within modules will be communicated by a variety of methods, analysing problems and developing solutions.</p>

<p>management models, skills and techniques.</p> <p>4. Appropriate technical and professional skills necessary to measure economic, social and environmental aspects within the rural areas themselves.</p> <p>5. Strategic decision-making skills.</p>	<p>Project management skills will be tested in practical tasks</p> <p>Other skills will be tested in coursework and the research project.</p>
D. Transferable skills	
<p>1. Effective leadership developed through critical self-reflection and self-awareness and an appreciation of the diversity of different perspectives on management approaches and practice.</p> <p>2. Presentation of the analysis of data, information and the resulting solutions via a range of methods and media.</p> <p>3. Ability to integrate and synthesis concepts, methods and skills from a range of disciplines.</p> <p>4. Ability to work effectively in both team environments and on individual tasks.</p>	<p>Teaching Learning methods and strategies</p> <p>The programme will enhance a students' transferable skills by developing their learning skills. The focus on learning through experience, participating in discussion, application of programme content to practical problem-solving scenarios and engaging in a process of review and reflection will support participants in their personal and professional life beyond the MSc. The research skills will expose students' to a critical overview of methods of thinking and knowing.</p>

19. Assessment Map

The programme has been developed to include a variety of assessment types and to balance group and individual assessment activities. Word counts, or their equivalents, are expressed in the module reference sheets and each module has followed an indicative module assessment weighting of approximately 3000 words assessment per module or its equivalent.

Level	Core Module *	Assessment 1 - %	%	Assessment 2 - %	%
7	4038a	Group case study	50	2 hour unseen exam	50
7	4040	Individual report	100		
7	4081	Workshop activities	60	2 hour seen exam	40
7	4250	Case study - individual	30	Team project	70
7	4201	Coursework	60	2 hour unseen exam	40
7	4075	Dissertation	100		

20. Programme structure

The format of the programme is a residential learning approach supported by a range of learning materials and activities presented on the RAU VLE. The programme is available over 1-year full time or 2 years part-time. There are two entry points, the start of semester 1 (September) and the start of semester 2 (February)

A Pg Diploma can be obtained by accumulating 120 credits through successful completion of 8 taught modules without the dissertation.

A Pg Certificate can be obtained by accumulating 120 credits through successful completion of any 4 taught core modules.

Four of the compulsory taught modules are delivered in semester 1. The final compulsory module and the 3 elective modules are studied in semester 2. The taught modules have been designed to be independent of each other so that students can start at either of the two entry points each year (start of semester 1 or 2).

Each module is supported by a comprehensive resources list that is maintained through the RAU Library Talis system.

The Research Project (worth 60 credits) includes a programme of research skills training sessions. Students present a project proposal for evaluation and then under the guidance of an allocated supervisor, construct a review paper as a precursor to designing and carrying out a research project. Results, interpretation and discussion are written up as a research paper. Both papers must follow the instructions to authors of a named scientific journal.

21. Work-based learning

N/A

22. Reference Points and benchmarks

The MSc Sustainable Agriculture and Food Security has been designed in accordance with [RAU Academic Policies and Procedures](#) that include guidance on Academic Regulations, Teaching Quality and QU Policies and Academic Strategies. In addition to the above the MSc has been designed with reference to the [QAA Characteristics Statement for Master's Degrees](#) September 2015

23. Entry Criteria where these differ from the RAU standard

RAU Standard MSc entry criteria

24. Module reference sheets

students must complete the 5 compulsory modules [all 15 credits]

- 4038a Integrated Agricultural Systems
- 4040 Sustainable Management of Soil and Water
- 4250 International Rural Development
- 4201 Poverty and Food Security
- 4081 Agricultural and Rural Policy

and 3 of the following 5 elective modules [all 15 credits] – no more than 30 credits can be L6 modules

- L7 4082 Natural Resource Appraisal and Management
- L6 3085 Climate Change and Development
- L7 4238 Integrated Organic Systems
- L6 3209 Sustainable Agricultural Intensification
- L6 3097 Small Scale Farming and Local Food Supply

Plus

- 4075 Independent Research Project. 60 credits

	4083a	4040	4081	4201	4250	4075
A) Knowledge and understanding of:						
A1 the principles and framework of sustainable development.	x	x	x		X	
A2 the principles of agricultural production at a variety of scales.	X					
A3 The sustainable management of natural resources		X				
A4 The principles of climate science and change		X				
A5 the provision of food quality, supply and security.	x			x		
A6 the processes of policy formulation.			x	x	x	
B) Intellectual Skills:						
B1 how to locate, synthesise, analyse and evaluate data and information from a wide range of sources to support and evidence solutions to practical problems and policy challenges.	x	x	x	x	x	x
B2 The value of critical thinking, creativity and leadership skills in addressing diverse organisational, business and social issues.	x		x		x	
B3 research methods and skills and how to undertake a substantive investigation into a theoretical or practical problem						x

	4038a	4040	4081	4201	4250	4075
C) Subject/Professional/Practical Skills:						
C1 communication through a variety of methods to a variety of audiences.			x		x	x
C2 How to analyse, interpret and respond to a range of data and information to make policy decisions			x	x	x	
C3 Manage projects through the application of project management models, skills and techniques.				x	x	
C4 Demonstrate the appropriate technical and professional skills necessary to measure economic, social and environmental aspects. within the rural areas themselves.	x				x	
C5 Demonstrate strategic decision-making skills.			x		x	
D) Transferable Skills and Other Attributes:						
D1 How to be an effective leader through critical self-reflection and self-awareness and an appreciation of the diversity of different perspectives on management approaches and practice.					x	
D2 How to present the analysis of data, information and the resulting solutions via a range of methods and media						x
D3. How to integrate and synthesis concepts, methods and skills from a range of disciplines.					x	x
D4 How to work effectively in both team environments and on individual tasks.			x	x	x	